

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

INVENTIO AG,

Plaintiff,

v.

THYSSENKRUPP ELEVATOR  
CORPORATION, et al.,

Defendants.

Civil Action No. 08-00874-RGA

MEMORANDUM OPINION

Michael J. Flynn, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Donald E. Reid, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Pierre R. Yanney, Esq. (argued), Stroock & Stroock & Lavan LLP, New York, NY; Stephen E. Underwood, Esq., Stroock & Stroock & Lavan LLP, New York, NY, Attorneys for the Plaintiff.

James M. Lennon, Esq., Young, Conaway, Stargatt & Taylor LLP, Wilmington, DE; David E. Schmit, Esq. (argued), Frost Brown & Todd LLC, Cincinnati, Ohio, Attorneys for the Defendant.

November 6, 2014

  
ANDREWS, U.S. DISTRICT JUDGE:

Currently pending before the Court are various post-trial motions. Inventio AG moves the Court for judgment as a matter of law (“JMOL”) or for a new trial on a litany of issues. (D.I. 583 & 584). ThyssenKrupp Elevator Corporation responded with three motions of its own: a motion for renewed judgment as a matter of law (D.I. 580), a motion for declaratory judgment of non-infringement (D.I. 581), and a motion to find one of the asserted patents in this case invalid for inequitable conduct and to declare the case “exceptional” under 35 U.S.C. § 285. (D.I. 582). For the reasons outlined below, Inventio’s motion for JMOL is granted with respect to inventorship. The remainder of the motion is denied. The Court partly grants ThyssenKrupp’s motion for a declaratory judgment of non-infringement and otherwise denies ThyssenKrupp’s motions.

### **BACKGROUND**

Both parties in this case are major players, or related to major players, in the elevator industry. The technology at issue relates to the phased modernization of conventional elevator systems in existing buildings. Two types of elevator systems are relevant for purposes of this lawsuit. The first is a conventional elevator system, in which the rider calls the elevator using the up or down buttons at the floor terminal and selects the destination floor once inside. The second is a destination dispatch system, in which the rider selects the desired floor at the floor terminal, or swipes an identification badge, and then the elevator system groups riders traveling to nearby floors into the same elevator. In this system, there are no buttons to select a floor inside the elevator car. By updating the technology in accordance with the patents’ teaching, elevators can be converted from a conventional system to a destination dispatch system without

forcing the complete shutdown of the elevator bank and the accompanying loss of working elevator capacity.

On November 21, 2008, Plaintiff Inventio AG filed this patent infringement action against ThyssenKrupp Elevator Americas Corp., ThyssenKrupp Elevator Corp., and ThyssenKrupp Elevator Manufacturing, Inc. (D.I. 1). The Court eventually granted summary judgment for the first and third defendants on all claims (D.I. 529), and thus the only defendant that went to trial was ThyssenKrupp Elevator Corp. (“Defendant”). Inventio accused three of ThyssenKrupp’s elevator overlay modernization installations of infringing U.S. Patent Nos. 6,935,465 (“the ’465 patent”) and 6,892,861 (“the ’861 patent”). (D.I. 397 at 5). The Court issued a lengthy claim construction opinion on June 15, 2010. (D.I. 135). The Court soon thereafter granted summary judgment to all defendants. (D.I. 163). The decision was reversed on appeal. (D.I. 179). After remand, on August 27, 2012, the case was reassigned to me. This Court construed two disputed patent terms on March 3, 2013 (D.I. 297) and revised several earlier constructions on January 14, 2014. (D.I. 525).

The case then progressed to the summary judgment stage. ThyssenKrupp filed motions for summary judgment of invalidity and non-infringement of both patents. (D.I. 394 & 396). Inventio responded with a motion for partial summary judgment of no invalidity for indefiniteness, written description, and best mode. (D.I. 413). The Court denied ThyssenKrupp’s motion for summary judgment on invalidity, and granted in part Inventio’s partial summary judgment motion with respect to indefiniteness and written description. (D.I. 504; D.I. 503 at p. 12). No part of ThyssenKrupp’s motion for summary judgment of non-infringement was granted. (D.I. 539).

The Court held a five-day jury trial beginning on February 24, 2014 (D.I. 566, 567, 568, 569 & 570), at the conclusion of which the jury returned a verdict largely in favor of ThyssenKrupp. (D.I. 565). The jury concluded that ThyssenKrupp infringed claims 1-3 of the '465 patent, but that those claims were invalid as obvious and for failing to name the correct inventors.<sup>1</sup> (*Id.*). With respect to the '861 patent, the jury found that claims 1 and 3 were not infringed and were invalid as obvious, for failing to disclose the best mode, and for failing to name the correct inventors. (*Id.*). The jury also determined that the appropriate amount of reasonable royalty damages to compensate Inventio for the infringement was \$40,320, and that "Schroeder" was the inventor who was not named. (*Id.*).

Inventio now seeks judgment as a matter of law on obviousness, inventorship, best mode as to the '861 patent, infringement as to the '861 patent, and relief as to the damages award. (D.I. 583; D.I. 584 at pp. 1-4). In the alternative, Inventio moves the Court for a new trial under Federal Rule of Civil Procedure 59(a)(1), except as to the infringement issue. (D.I. 583; D.I. 584 at pp. 37-40; D.I. 590 at pp. 29-31). ThyssenKrupp responded with a JMOL motion for non-infringement of the '465 patent (D.I. 580) and a motion for declaratory judgment of non-infringement for all asserted claims. (D.I. 581). In addition, ThyssenKrupp seeks a finding that the '861 patent is unenforceable due to inequitable conduct and a declaration that this case is "exceptional" under 35 U.S.C. § 285. (D.I. 582). Each of these issues will be addressed in turn.

## **LEGAL STANDARD**

### **A. Judgment as a Matter of Law**

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<sup>1</sup> The jury did not find claims 1-3 of the '465 patent invalid for failure to disclose the best mode. (D.I. 565 at 3).

Judgment as a matter of law is appropriate if “the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for [a] party” on an issue. FED. R. CIV. P. 50(a)(1). “Entry of judgment as a matter of law is a ‘sparingly’ invoked remedy, ‘granted only if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference, there is insufficient evidence from which a jury reasonably could find liability.’” *Marra v. Phila. Hous. Auth.*, 497 F.3d 286, 300 (3d Cir. 2007) (citation omitted).

“To prevail on a renewed motion for JMOL following a jury trial, a party must show that the jury’s findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury’s verdict cannot in law be supported by those findings.” *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998) (alterations in original) (internal quotation marks omitted). “‘Substantial’ evidence is such relevant evidence from the record taken as a whole as might be accepted by a reasonable mind as adequate to support the finding under review.” *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984).

In assessing the sufficiency of the evidence, the Court must give the non-moving party, “as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor and, in general, view the record in the light most favorable to him.” *Williamson v. Consol. Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991). The Court may “not determine the credibility of the witnesses [nor] substitute its choice for that of the jury between conflicting elements in the evidence.” *Perkin-Elmer Corp.*, 732 F.2d at 893. Rather, the Court must determine whether the evidence supports the jury’s verdict. *See Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1014 (Fed. Cir.

1998); *Gomez v. Allegheny Health Servs. Inc.*, 71 F.3d 1079, 1083 (3d Cir. 1995) (describing standard as “whether there is evidence upon which a reasonable jury could properly have found its verdict”); 9B CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 2524 (3d ed. 2008) (“The question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury might reasonably find a verdict for that party.”).

Where the moving party bears the burden of proof, the Third Circuit applies a different standard. This standard “requires the judge to test the body of evidence not for its insufficiency to support a finding, but rather for its overwhelming effect.” *Fireman’s Fund Ins. Co. v. Videfreeze Corp.*, 540 F.2d 1171, 1177 (3d Cir. 1976) (quoting *Mihalchak v. Am. Dredging Co.*, 266 F.2d 875, 877 (3d Cir. 1959)). The Court “must be able to say not only that there is sufficient evidence to support the finding, even though other evidence could support as well a contrary finding, but additionally that there is insufficient evidence for permitting any different finding.” *Fireman’s Fund Ins. Co.*, 540 F.2d at 1171 (quoting *Mihalchak*, 266 F.2d at 877).

## **B. Motion for a New Trial**

Federal Rule of Civil Procedure 59(a)(1)(A) provides, in pertinent part: “The court may, on motion, grant a new trial on all or some of the issues—and to any party— . . . after a jury trial, for any reason for which a new trial has heretofore been granted in an action at law in federal court . . . .” Among the most common reasons for granting a new trial are: (1) the jury’s verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage of justice; (2) newly discovered evidence exists that would likely alter the outcome of the trial; (3) improper conduct by an attorney or the court unfairly influenced the verdict; or

(4) the jury's verdict was facially inconsistent. *See Zarow-Smith v. New Jersey Transit Rail Operations, Inc.*, 953 F.Supp. 581, 584-85 (D.N.J. 1997).

The decision to grant or deny a new trial is committed to the sound discretion of the district court. *See Allied Chem. Corp. v. Daiflon, Inc.*, 449 U.S. 33, 36 (1980); *Olefins Trading, Inc. v. Han Yang Chem. Corp.*, 9 F.3d 282, 289 (3d Cir.1993) (reviewing district court's grant or denial of new trial motion under the "abuse of discretion" standard). Although the standard for granting a new trial is less rigorous than the standard for granting judgment as a matter of law—in that the Court need not view the evidence in the light most favorable to the verdict winner—a new trial should only be granted where "a miscarriage of justice would result if the verdict were to stand," the verdict "cries out to be overturned," or where the verdict "shocks [the] conscience." *Williamson*, 926 F.2d at 1352–53.

## ANALYSIS

### A. Obviousness

#### 1. Legal Standard

A claim is invalid as obvious "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a). Obviousness is a question of law decided on the basis of the four *Graham* factors: (1) the level of ordinary skill in the art; (2) the scope and content of the prior art; (3) the differences between the prior art and the challenged claim; and (4) secondary considerations of non-obviousness. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966)).

In *KSR International Co. v. Teleflex, Inc.*, the Supreme Court instructed courts to take an “expansive and flexible approach” to determining obviousness. 550 U.S. 398, 415 (2007). The Court emphasized, “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. It also stated that “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* at 417. Ultimately, “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

In making this assessment, courts must consider whether there was a reason to combine the known elements in the fashion claimed by the patent at issue. *Id.* at 418. The reason can come from the prior art, the background knowledge of one of ordinary skill in the art, the nature of any problem or need to be addressed, market demand, or common sense. *Id.* at 418, 422. While motivation to combine is an issue of fact, district courts cannot accept a jury’s finding that motivation is lacking when the motivation is evident in the prior art references themselves or “a matter of common sense.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1243, 1245 (Fed. Cir. 2010). Obviousness must be proven by clear and convincing evidence. *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1349 (Fed. Cir. 2001) (citing *Rockwell Int’l. Corp. v. United States*, 147 F.3d 1358, 1364 (Fed. Cir. 1998)).

## 2. Analysis

Inventio moves the Court for JMOL of nonobviousness. (D.I. 584 at p. 13). The Court will address the *Graham* factors in turn.

### a. *Level of the Ordinary Skill in the Art*



Defendant argues that the person of ordinary skill in the art (“POSITA”) would be a person “having relatively high skill level, especially familiarity with modernization elevator systems, destination-based dispatch systems, experience with temporary or transitional overlays, and an understanding of the modernization market.” (D.I. 585 at p. 7, *see* D.I. 568 at 259-60). Plaintiff provided no argument or evidence as to the skill level and knowledge of a POSITA.<sup>2</sup> The Court thus accepts Defendant’s definition of a POSITA.

*b. Scope and Content of the Prior Art*

*i. Historical Modernization*

The Court finds that overlay modernization and phased modernization were known in the prior art and used for conventional to conventional modernization (*i.e.*, modernizing conventional elevators with new technology, but not switching to a destination dispatch system). Phased modernization involves spreading out the upgrade over time, thereby spreading out the cost. (D.I. 565 at 236). ThyssenKrupp’s expert testified that phased modernization was known well before the ’465 and the ’861 patents were filed (*id.*), and supported his opinion with prior art references. (*See* DTX 17 at 9).

The Court further finds that “overlay modernization” was a common technique prior to the filing of the ’465 and the ’861 patents. An overlay is a circuit that allows a new group control system (such as a destination dispatch system) to communicate with existing elevator controllers by converting electrical signals. (D.I. 568 at 229-32). It acts, essentially, as a translator between the modern dispatch system and the existing elevator controls. (*Id.* at 232). Both Dr. Friedli, the inventor, and ThyssenKrupp’s expert agreed that overlay modernization

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<sup>2</sup> Indeed, Plaintiff’s expert provided no structured obviousness analysis. (*See* D.I. 568 at 247-54).

was a common technique used to update elevator control systems. (D.I. 566 at 247-48; D.I. 568 at 260-61). Furthermore, Defendant's expert testified, without contradiction, that temporary overlay for conventional to conventional modernization prior to the time of the Inventio patent "would have been something that a person of ordinary skill in the art could do, based on the fact that it had been done since 1982, as covered in all the different articles, the Fortune article and the Arora article and the Lustig article. . . ." (D.I. 568 at 261).

Plaintiff argues that ThyssenKrupp's expert's testimony lacked credibility, as he was confusing, vague, and contradictory regarding the term "overlay." (D.I. 590 at 13). Plaintiff further claims that the expert's testimony was pure *ipse dixit*. (*Id.* at p. 15). The Court disagrees. While the expert discussed various forms of overlay systems, as described in various pieces of prior art, the jury found his testimony persuasive, and there is no reason to doubt the jury's credibility assessment. Furthermore, the Court finds that the inventor was certainly a POSITA at the time of the invention. His description of what could be accomplished is highly persuasive. Finally, the accusation that the expert's testimony is *ipse dixit* simply fails, considering that the expert cited to the Fortune article, the Arora article, and the Lustig article as evidence that overlay modernization was well known at the time of the invention.

ii. 1985 Fortune Article (DTX 17)

This article discusses phased modernization and the use of overlay in the modernization. (DTX 17 at 3). The article explicitly predicts that destination dispatch will be the next form of elevator control. (DTX 17 at 1, 3-4) (describing "introduc[ing] circuits that will permit corridor call destination registration coupled with lobby sensors that will detect the number of people approaching or waiting for an elevator group"). This article was presented to the jury to describe phased modernization and the future use of destination dispatch systems.

iii. *1989 Wolfe Article (DTX 206)*

This article discusses the competitive pressure to develop new modernization techniques. The article begins, “Elevator modernization, unquestionably, represents the most dynamic segment of today’s elevator marketplace. State-of-the-art elevator technology and the highly competitive struggle of leasing agents to attract and keep tenants, have combined to create a market even larger than when elevators were being converted from manual to automatic operation.” (DTX 206 at 1). This article was presented to the jury “to show the prior art forces at work in the highly competitive modernization market for building owners to update to the latest elevator technology. . . .” (D.I. 585 at p. 9).

iv. *1994 Ovaska ’857 patent (DTX 16)*

This patent discusses the use of an overlay in a conventional phased modernization. This is demonstrated by figure 3 of the ’857 patent, which represents a partially modernized elevator control system. (DTX 16 at 4). ThyssenKrupp’s expert testified that figure 3 depicts a “conventional to conventional phased modernization using an overlay.” (D.I. 568 at 245-46). The expert further identified that the figure contains conventional hall calls, a dispatching controller, an overlay portion, an existing elevator controller, and a serial communications bus. (*Id.* at 246). The expert testified that the overlay in the ’857 patent converted serial destination hall call boarding floor signals into discrete signal call reports that could be used by the existing elevator. (*Id.* at 248-49). Defendant’s expert was persuasive. The ’857 patent illustrates both a conventional to conventional phased modernization using an overlay, as well as the ability to convert serial destination hall call boarding floor signals to discrete signals usable by the existing elevators.

v. *1990 Lustig Paper (DTX 29)*

Similarly to the Wolfe article, the Lustig paper describes prior art modernization as the installation of a “single group dispatch panel” that, when activated, “takes upon itself the dispatching system.” (DTX 29 at 8). The paper continues to discuss how the new panel can either completely replace the old panel or be connected to the old panel via I/O (*i.e.*, input/output) ports. (*Id.*) Furthermore, the paper provides evidence of the demand for modernization and notes, citing the 1985 Fortune article, that the use of an overlay device was expected to reduce waiting times by 20 to 30 percent. (*Id.* at 5-6, 8).

vi. *1996 Arora Article (DTX 207)*

This article discusses both conventional to conventional overlay modernization and phased modernization. (DTX 207 at 1-2). Specifically, the article states, “In the average four- or five-car group, as one lift is moderni[z]ed, the moderni[z]ed lift is brought back into the unmoderni[z]ed group via the overlays, which can communicate digital to analogue, leaving the building with a three- or four-car group – thereby maintaining efficient service. Moderni[z]ing in the traditional way – by sequentially moderni[z]ing without an overlay – would result in a 20% decrease in carrying capacity.” (*Id.* at 2).

vii. *1990 Schroeder Article (DTX 56)*

This article teaches ways that a destination dispatch system could be used as an overlay system. (DTX 56 at 4). The article states that:

[The described destination dispatch system] can be applied in “overlay” form to modernizations, or it can be supplied with new equipment. The “overlay” application is particularly attractive as a first stage of a complete modernization program: The “overlay” stage will boost the handling capacity of the elevator system, thus making the second time-consuming stage of drive replacements less annoying to building tenants, with one elevator after the other out of operation for an extended period of time.

(*Id.*) Furthermore, the article clearly teaches the advantages of installing the destination dispatch at the beginning of the modernization process, so as to decrease the traffic issues amongst passengers. (*Id.*)

The jury found that “Schroeder” was the inventor of the patents. (D.I. 565 at 3). While that verdict will not stand, it reflects the fact that the Schroeder article describes the concept of the invention.

*viii. 1988 Schroeder '520 Patent (DTX 208)*

This patent teaches a destination type system in which there is a “group control that would allow you to enter a destination call while standing at the floor outside the elevator. So the basis for destination dispatch.” (D.I. 568 at 264-65). The abstract to the patent itself reads in part:

A group control assigns elevator cars to floor calls optimized in such a manner, that minimal waiting times result and the elevating capacity is increased. A computing device provided for each elevator calculates at every floor a sum proportional to the time losses of the waiting passengers from the distance between the floor and the car position as indicated by a selector, the intermediate stops to be expected within the distance and the instantaneous car load.

(DTX 208 at 1).

*ix. 1997 Inventio '094 patent (DTX 200)*

This patent teaches a destination dispatch system having floor terminals that accept inputs from cards and identification codes as depicted in figure 1. (DTX 200 at 2).

*c. Difference Between the Prior Art and the Challenged Claims*

The basic problem that the inventor faced was converting a conventional elevator system to new technology, such as the destination dispatch control. The prior art clearly lays out that (a) destination dispatch systems were known, (b) conventional to conventional phased modernization was known, and (c) overlay modernization was known. The Inventio patents’

claims in suit merely combine known modernization techniques, as used with conventional modernization methods, and apply them to the newer destination dispatch system. As the Supreme Court held in *KSR*, “a combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” 550 U.S. at 416.

Plaintiff argues that the following elements of the asserted claims are not found in the prior art, or were not fully explained by ThyssenKrupp’s expert witness: (1) modernizing device, (2) converting destination signals into call reports, (3) destination signal, (4) temporarily connected, (5) the elevator control being disconnected from the hall call transmitters and the car call transmitters of the elevator installation, and (6) the limitations added in the dependent claims. (D.I. 584 at p. 16). The Court finds that each of these elements are within the scope of the content of the prior art, as detailed above, and will address each element in turn. As the other claim elements were not raised by Plaintiff, and thus not disputed, the Court need not, and does not, address them.

*i. Modernizing device*

Plaintiff argues that ThyssenKrupp’s expert “failed to identify any particular disclosure in the prior art that corresponds to the ‘modernizing device.’” (D.I. 584 at p. 17) (emphasis omitted). Specifically, Plaintiff argues that while the Ovaska patent was identified, Defendant failed to specify what or where in the reference refers to a modernizing device. (*Id.*). Defendant argues that “the claimed modernizing device is simply an overlay or interface device, of the type commonly used in overlay modernizations.” (D.I. 585 at p. 16). The Court defined a modernizing device as “an electrical circuit that interfaces between a computing unit and an elevator control.” (D.I. 562 at p. 2). The Court agrees that the evidence presented at trial proves that a modernizing device is found in the prior art. The ThyssenKrupp expert clearly laid out

what was required for a modernizing device, “an interface circuit” that “collects electronics that go between the new equipment and the old equipment serial information and typically in discrete wires out,” and then identified the Ovaska patent as teaching this component. (D.I. 569 at p. 26; *see* DTX 16 at p. 9).

*ii. Modernizing device ‘converts’ destination signals into call reports*

Plaintiff argues that the ThyssenKrupp expert’s testimony was “pure *ipse dixit*.” (D.I. 584 at p. 18). Conversely, Defendant maintains that there was sufficient evidence presented to show that the “modernizing device ‘converts’ destination signals into call reports.” (D.I. 585 at p. 17). The Court agrees with Defendant. The ThyssenKrupp expert testified that the signals both entering and leaving the modernizing device were well known in the industry at the time of the invention. (D.I. 568 at 275-76). Furthermore, ThyssenKrupp’s expert convincingly testified, “In my opinion, any person of ordinary skill in the art knowing their own destination dispatch system and what types of signals and outputs, and knowing elevator controllers and how they operate would be able to design a circuit to convert serial to circuit discrete outputs.” (*Id.* at 276). The Court agrees. As the Supreme Court stated in *KSR*, “a court can consider the inferences and creative steps a person of ordinary skill in the art would employ.” 550 U.S. at 418. The Court finds that it would be well within a POSITA’s ability to design a circuit meeting the requirements of this claim.

*iii. Temporarily connected*

The Court has construed “temporarily connected” as “used in connection with the elevator installation during modernization, and removed after modernization is complete.” (D.I. 562 at 4). The Court finds that this element is taught in both the Schroeder article and the

Ovaska patent, as the ThyssenKrupp expert testified. (D.I. 569 at 12, 25-27; *see* DTX 56 at 4; DTX 16 at p. 8 (“temporary equipment”).

iv. *The elevator control being disconnected from the hall call transmitters and the car call transmitters*

The Court finds that the prior art taught “the elevator control being disconnected from the hall call transmitters and the car call transmitters.” As the ThyssenKrupp expert testified, the Schroeder article taught that keeping the car call buttons would be counterproductive. (D.I. 569 at 57; *see* DTX 56 at 1).

v. *'465 patent, dependent claim 2*

This claim added an interrupting and a connecting step. Dependent claim 2 reads:

The method according to claim 1 wherein said step c. is performed by interrupting at least one existing electrical floor call transmitter line between at least one floor call transmitter and the elevator control and connecting the elevator control by an electrical line with said modernizing device.

'465 Patent, col 11, ll. 26-31. Defendant put forth evidence that in the prior art destination dispatch systems, the elevator control did not take its commands from hall call buttons, *i.e.*, that the existing electrical floor call transmitter line had been interrupted. (D.I. 569 at 59-61).

Furthermore, Defendant's expert testified that the connecting step of dependent claim 2 was known. The prior art destination dispatch systems did not include up/down buttons, and they thus must have connected the elevator control to the overlay, as otherwise the elevator control would not be able to receive commands. (*Id.* at 60-61). The Court finds this evidence sufficient and persuasive, and thus finds that elements added by dependent claim 2 were taught in the prior art.

vi. *'465 patent, dependent claim 3*



This claim adds the claim elements of “interrupting at least one existing car call transmitter line” and “connecting the elevator control by an electrical line with said modernizing device.” ’465 Patent, col 11, ll. 32-36. The Court finds that these elements were also clearly taught by the prior art. In the prior art destination dispatch systems, the elevator control would cease operating based on the car call transmitters, and were thus interrupted. Furthermore, the connecting step of this claim was the “common sense” step of connecting the elevator control to the overlay, for omitting this step would prevent the prior art destination dispatch system from working. The Federal Circuit has made clear that the “legal determination of obviousness may include recourse to logic, judgment, and common sense.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1239 (Fed. Cir. 2010). Therefore, the Court finds this element to have been in the prior art.

*vii. ’861 patent, dependent claim 3*

Dependent claim 3 of the ’861 patent adds the requirement that “said modernizing device has at least one output connected with at least one car call transmitter line input of the elevator control for issuing said at least one call report.” ’861 Patent, col 11, ll. 26-29. ThyssenKrupp’s expert testified that this additional step was one of the “best ways to put an overlay on an elevator and get it [to] where you want” at the time of the invention. (D.I. 569 at 63). Furthermore, it seems to the Court that this step is a simple outgrowth of the fact that you have an output wire and an input wire (located in the elevator control) and it is common sense that one would connect these two wires. Therefore, the Court finds that the additional elements contained in dependent claim 3 of the ’861 patent were taught by the prior art.

*d. Secondary Considerations*

No secondary concerns were presented at trial and therefore none will be considered here.

*e. Motivation to Combine*

With all the elements of the claim being present within the prior art, the only remaining determination is whether there was motivation for a POSITA to combine the references. The Court finds that such motivation was not only present but ample. Defendant put forth considerable testimony and evidence that there existed marketplace pressures to modernize elevators to the destination dispatch system. (DTX 29; DTX 206). A POSITA would have also been well aware of the fact that the modernization process, as it was, required a reduction in capacity. (DTX 56). These two pressures alone are sufficient to show that a POSITA would have been motivated to combine prior art to fix the problem. With this motivation, it would have been obvious to modernize conventional controlled elevators to destination dispatch elevators in the way proposed by the patent claims at issue here.

Therefore, the Court finds, by clear and convincing evidence, that all of the claims at issue here are obvious. There is no reason to grant a JMOL on obviousness.

3. Motion for a New Trial

Plaintiff requests in the alternative that the Court order a new trial, because the jury's verdict was against the weight of the evidence and because the Court made a prejudicial legal error by excluding Inventio's evidence of secondary considerations of non-obviousness. For all the reasons explained above, the Court denies Plaintiff's request for a new trial on the ground that it is against the weight of the evidence.

The Court also denies Plaintiff's request for a new trial on the ground that Plaintiff was prejudiced by the Court excluding evidence of secondary considerations. Before trial, Defendant moved *in limine* to exclude Inventio's evidence of secondary considerations. (D.I. 548-2). Plaintiff sought to bring in evidence of copying and commercial success, both of which require

Plaintiff to show a nexus between the secondary considerations and the claimed invention. “In meeting its burden of proof, the patentee in the first instance bears the burden of coming forward with evidence sufficient to constitute a prima facie case of the requisite nexus.” *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). Furthermore, “an expert must establish a nexus between that commercial success [or copying] and the patented technology.” *LadaTech, LLC v. Illumina, Inc.*, 2012 WL 2153646 (D. Del. Jan. 24, 2012). Here, Plaintiff was trying to use a non-accused modernization project as evidence of copying and commercial success, for which it would have been necessary to perform an infringement analysis. Plaintiff failed to address this issue in any of its expert reports, and thus the evidence was properly barred. Therefore, I will also deny Plaintiff’s new trial motion on this ground.

## **B. Inventorship**

Defendant does not oppose Plaintiff’s JMOL motion regarding inventorship. (D.I. 585 at p. 1). As the parties are in agreement, the Court grants the JMOL on inventorship and reverses the jury’s finding that the patents do not name the correct inventor.

## **C. Best Mode**

### **1. Legal Standard**

A holding of invalidity for failure to disclose the best mode requires clear and convincing evidence that the inventor both knew of and concealed a better mode of carrying out the claimed invention than that set forth in the specification. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1330 (Fed. Cir. 2002).

Compliance with the best mode requirement is a question of fact which involves a two-pronged inquiry. The first prong is subjective, focusing on the inventor’s state of mind at the time he filed the patent application, and asks whether the inventor considered a particular mode of practicing the invention to be superior to all other modes at the time of filing. The second prong is objective and asks whether the inventor adequately disclosed the mode he considered to be superior.

*Id.* (citations omitted). “[A]n inventor need not disclose a mode for obtaining unclaimed subject matter unless the subject matter is novel and essential for carrying out the best mode of the invention.” *Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 963 (Fed. Cir. 2001).

“Furthermore, the best mode requirement does not extend to production details or routine details.” *Id.* “Routine details, on the other hand, implicate the quality and nature of invention, but their disclosure is unnecessary because they are readily apparent to one of ordinary skill in the art.” *Id.*

## 2. Analysis

The jury found that the inventor had disclosed the best mode for the '465 patent, but had not done so for the '861 patent. Plaintiff argues that the verdict is logically inconsistent and that no reasonable jury could have found a best mode violation for the asserted claims of either patent. (D.I. 584 at p. 32). Defendant disagrees.

Defendant argues that the evidence showed, “Inventor Friedli believed there was a ‘best way’ to practice the claimed invention, specifically for implementing the critical ‘converter’ part of the claimed modernizing device, in particular he subjectively preferred to use a transceiver (particularly an Echelon FTT-10A) coupled with a microprocessor (particular a Neuron 3150 microprocessor).” (D.I. 585 at p. 29). It is the coupling of the transceiver and the microprocessor that Defendant cites to as the best mode, along with the relevant particular parts. Plaintiff argues that evidence was presented at trial that the Neuron 3150 microprocessor and the Echelon FTT-10A transceiver were commercially available. (D.I. 584 at p. 32). Furthermore, Plaintiff argues Dr. Friedli testified that he did not use, and therefore couple, the aforementioned components because they were “subjectively better than other options,” but rather because it was

the only equipment compatible with the Schindler equipment he was trying to modernize. (*Id.* at 33).

The Court finds that there was sufficient evidence for a jury to have determined that there was a best mode. Dr. Friedli was a poor witness on his own behalf, from which the jury could infer his subjective belief.<sup>3</sup> Whether or not the inventor subjectively thought the particular transceiver and microprocessor were the best option here was fundamentally a question for the jury. The jury was presented with the inventor himself, who tried to convince them that he did not believe that these components were the “best mode.” The jury did not believe his testimony, which is a sufficient basis to support its conclusions. The Court finds that the jury had substantial evidence to support its conclusions that Dr. Friedli did not disclose the best mode for the ’861 patent. This ground therefore cannot serve as a basis to grant Plaintiff’s JMOL or its parallel motion for a new trial.

Plaintiff also moves for a new trial on the ground that the verdict is not consistent. Plaintiff notes that the patents share the same specification. (*Id.* at 36). Plaintiff argues that the best mode pertained to the “modernizing device,” and because the device appears in the claims of both patents, there must be a best mode violation as to either both or neither. (*Id.*). I disagree.

In the face of seemingly inconsistent verdicts, it is the court’s duty to “attempt to reconcile the jury’s findings, by exegesis if necessary” before setting a verdict aside and ordering a new trial. *Gallick v. Baltimore & O. R. Co.*, 372 U.S. 108, 119 (1963). “The court is obligated to reconcile a jury’s verdict independently of whether the jury likely reasoned in the same fashion and it is the court’s duty to harmonize the jury’s answers if it is at all possible to do so.” *Mycogen Plant Sci., Inc. v. Monsanto Co.*, 61 F. Supp. 2d 199, 266 (D. Del. 1999), *aff’d*, 243

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<sup>3</sup> I might have reached a different conclusion but for my deference to the jury’s findings.

F.3d 1316 (Fed. Cir. 2001). The Court finds that the jury's verdicts with respect to best mode are reconcilable.<sup>4</sup>

“[A] best mode defense only affects those claims covering subject matter the practice of which has not been disclosed in compliance with the best mode requirement.” *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 n.5 (Fed. Cir. 1991). As discussed above, the best mode violation pertained to the converter in the modernizing device. The converter was claimed in the '861 patent, an apparatus patent. The jury found those claims invalid for failure to disclose a best mode of operating the apparatus. Plaintiff's contention that the best mode analysis must necessarily be the same for the corresponding method patent fails. Even though the modernizing device containing the converter is mentioned in claims 1-3 of the '465 patent, the device is not claimed. A claim drafted as a method claim does not protect the apparatus, even though the method uses the apparatus. *Bandag, Inc. v. Al Bolser's Tire Stores, Inc.*, 750 F.2d 903, 922 (Fed. Cir. 1984) (holding that a method claim does not encompass the device used to perform the method). Indeed, a single claim cannot cover both a method and an apparatus. *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005). As such, the converter was not, and could not have been, claimed in the '465 patent. It is entirely reasonable, then, that the jury did not find a best mode violation for the '465 patent and the verdicts are not inconsistent. The Court therefore denies Plaintiff's motion for a new trial on the basis of inconsistent verdicts.

#### **D. Infringement**

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<sup>4</sup> Because the Court finds that the verdicts are not inconsistent, there is no need to address whether a party must raise an objection before the jury is dismissed in order to preserve the right to move for a new trial based on inconsistent verdicts. (*See* D.I. 585; D.I. 589).

Both parties argue that the jury's verdict as to infringement, as it relates to issues decided adversely to them, is not supported by substantial evidence. The Court will address both parties' motions concurrently.

### 1. Legal Standard

In order to establish literal infringement, each and every claim limitation must be present in the accused product. *Abraxis Bioscience, Inc. v. Mayne Pharma (USA) Inc.*, 467 F.3d 1370, 1378 (Fed. Cir. 2006). This must be proven by a preponderance of the evidence. Infringement is a question of fact. *Sunovion Pharmaceuticals, Inc. v. Teva Pharmaceuticals USA, Inc.*, 731 F.3d 1271, 1275 (Fed. Cir. 2013). Thus where, as here, there was conflicting evidence, it is possible for a verdict for either side to have been supported by substantial evidence.

### 2. Analysis

#### *'861 Patent, claims 1 and 3*

Plaintiff argues that the jury did not have sufficient evidence to conclude that claims 1 and 3 of the '861 patent had not been infringed, and in fact that substantial evidence shows that the claims were infringed.<sup>5</sup> Defendant disagrees.

Plaintiff argues that because the jury found direct literal infringement of claims 1, 2, and 3 of the '465 patent, the jury must have found that each and every limitation set forth in those claims was satisfied. (D.I. 584 at p. 37). Plaintiff then argues that, because the claims in the '861 and '465 patents are so similar, the question for the Court is whether there is sufficient evidence regarding the differences between the '861 patent claims and the '465 patent claims to support the jury's conclusions. (*Id.*). With respect to claim 1, Plaintiff argues that the only

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<sup>5</sup> Of course, since Plaintiff has the burden of proof on infringement, for this Court to grant JMOL of infringement, the Court would have to find the evidence of infringement "overwhelming." *Fireman's Fund Ins. Co.*, 540 F.2d at 1177.

additional element in the '861 patent is “a device for temporarily operating an elevator installation . . . and at least one computing unit connected to said modernizing device.” (*Id.* at p. 38). Plaintiff contends that Defendant’s expert did not provide adequate evidence to differentiate the claims, and that the evidence he did provide misconstrued the word “temporary.” (*Id.*). Plaintiff argues that the temporary device is the only difference because claim 1 of the '861 patent is analogous to steps in claims 2 and 3 of the '465 patent, which the jury found infringed. (*Id.* at p. 38 n.8). As for claim 3 of the '861 patent, Plaintiff argues that the only evidence on this issue was presented by its expert and as such could not have benefited Defendant. (*Id.* at p. 40)

Defendant argues that while there was evidence favorable to Plaintiff, there was also evidence favorable to Defendant, and it was not so one sided as to permit the Court to reverse the jury’s decisions. (D.I. 585 at p. 32). For example, Defendant argues that claim 1 of the '861 patent and claims 1 and 2 of the '465 patent are not analogous, because for claim 1 of the '861 patent the jury could have reasonably concluded “that in the accused installations the control did not ‘cease[] operating based on input from the car call . . . transmitters,’ since (1) the elevator control did not stop operating based on input from the car call transmitters; and/or (2) the installations retained the capability to operate the elevator control from the car call buttons.” (*Id.* at p. 33) (internal brackets and ellipsis in original). The Court agrees, and finds that there is substantial evidence for this hypothetical reasoning within the record, which means that the evidence of infringement is not overwhelming. Thus, the Court will not disturb the jury’s conclusion as to claim 1.

As the Court finds that the jury’s conclusion of no infringement as to claim 1 was supported by sufficient evidence, there is no reason for the Court to further consider claim 3. As a dependent claim, claim 3 cannot be infringed unless independent claim 1 is infringed. *See*



*Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989) (“One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim.”). Therefore, the Court denies Plaintiff’s JMOL request as it pertains to infringement.

*’465 Patent, claims 1, 2, and 3*

Defendant argues that there is no evidence that they performed the claimed method steps or that the accused installations fulfilled the claim requirements. (D.I. 585 at p. 1). Plaintiff responds that there was substantial evidence to support the jury’s finding of infringement, including, among other things, witness testimony and a number of diagrams and specifications of the accused installations. (D.I. 590 at 38). I agree. There is evidence supporting both sides, and it is not the role of the Court to “substitute its choice for that of the jury between conflicting elements in the evidence.” *See Perkin-Elmer Corp.*, 732 F.2d at 893. The Court finds that based on the evidence before it, a reasonable jury could have found that the claims were infringed and therefore denies Defendant’s JMOL as it pertains to infringement.

**E. Declaratory Judgment**

Defendant also moves for a declaratory judgment of non-infringement on all claims. (D.I. 581). Whether or not to grant a declaratory judgment rests in the sound discretion of the Court. *Step-Saver Data Sys., Inc. v. Wyse Tech.*, 912 F.2d 643, 646-47 (3d Cir. 1990). Plaintiff does not oppose the motion for a declaratory judgment of non-infringement with respect to claims 1 and 3 of the ’861 patent, and the Court therefore grants a declaratory judgment on those claims.

With respect to claims 1-3 of the ’465 patent, the fundamental question is whether the Court should enter a judgment of non-infringement, despite the jury’s verdict, because the jury

found the claims invalid as obvious. Defendant argues that an invalid patent cannot be infringed as a matter of law. (D.I. 601 at p. 1). Plaintiff responds that a finding of invalidity means that there can be no liability for infringement, but does not mean that there was no infringement. (D.I. 600 at 1). The Court agrees with Plaintiff.

“Though an invalid claim cannot give rise to liability for infringement, whether it is infringed is an entirely separate question . . . .” *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1583 (Fed. Cir. 1983). Defendant argues that this long-standing precedent is no longer true in light of the Federal Circuit’s opinion in *Commil USA, LLC v. Cisco Sys., Inc.*, which stated, “It is axiomatic that one cannot infringe an invalid patent.” 720 F.3d 1361, 1368 (Fed. Cir.), *reh’g denied*, 737 F.3d 699 (Fed. Cir. 2013), *petition for cert. filed*, 82 U.S.L.W. 3459 (U.S. Jan. 23, 2014) (No. 13-896). I disagree with Defendant’s interpretation. *Commil* involved induced infringement, which requires a specific intent to induce direct infringement. *Id.* The court held that a good faith belief of invalidity could be considered by the fact-finder as evidence that might negate intent. *Id.* at 1368-69. That holding is inapposite to the present case, because direct infringement does not require intent. *See Florida Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank*, 527 U.S. 627, 645 (1999). Defendant offers no other reasons to disturb the jury’s verdict. The Court therefore denies Defendant’s motion for a declaratory judgment with respect to claims 1-3 of the ’465 patent.

## **F. Damages**

Plaintiff further moves that the Court amend or vacate the jury’s award of \$40,320 in damages, as this amount is nowhere within the range of damages provided by either expert and there is no discernable basis in the record for the sum. (D.I. 584 at p. 40). I disagree. “A jury’s decision with respect to an award of damages must be upheld unless the amount is grossly

excessive or monstrous, clearly not supported by the evidence, or based only on speculation or guesswork.” *State Contracting & Eng’g Corp. v. Condotte Am., Inc.*, 346 F.3d 1057, 1072 (Fed. Cir. 2003) (quotation marks omitted). Here, the range of damages presented by the experts was \$67,200, from Defendant’s expert, and \$340,000, from Plaintiff’s expert. (D.I. 584 at p. 40).

The damages award is clearly supported by the evidence. The jury found that three of the five asserted claims were infringed. Three-fifths of \$67,200 is \$40,320. While one cannot know exactly how a jury comes to any conclusion, the jury may reasonably have accepted Defendant’s damages methodology and concluded that three-fifths of the damages estimate was appropriate compensation for infringing three of five claims. As such, the present award of damages is clearly supported by the evidence. It is thus also not “grossly excessive or monstrous.”

Therefore the Court denies Plaintiff’s motion to amend or vacate the jury’s damages verdict.

#### **G. Inequitable Conduct**

Defendant moves this Court to determine whether there was inequitable conduct, a matter of equity for the Court to decide. (D.I. 582).<sup>6</sup> Defendant argues that Dr. Friedli committed inequitable conduct by intentionally concealing the best mode and disclosing a false mode. (D.I. 585 at 57-60). Plaintiff disagrees.

##### **1. Legal Standard**

“To prevail on the defense of inequitable conduct, the accused infringer must prove that the applicant misrepresented or omitted material information with the specific intent to deceive the PTO.” *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1287 (Fed. Cir. 2011) (en banc). Failure to disclose a best mode can lead to a finding of inequitable conduct when it is

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<sup>6</sup> The parties requested that the Court adjudicate the inequitable conduct claim following the jury trial. (D.I. 548 at 28).

coupled with disclosure of a fictitious mode of operating the invention. *U.S. Gypsum Co. v. Nat'l Gypsum Co.*, 74 F.3d 1209, 1216 (Fed. Cir. 1996) (citing *Consolidated Aluminum Corp. v. Fosco Int'l. Ltd.*, 910 F.2d 804 (Fed. Cir. 1990)).

## 2. Analysis

The Court finds that Dr. Friedli omitted material information by failing to disclose the best mode. Plaintiff has not, however, shown that he acted with the intent to deceive the PTO. An applicant discloses a false mode of operating when he discloses a mode knowing that it does not work. *See Consolidated Aluminum Corp.*, 910 F.2d at 808-09. Plaintiff argues that disclosing “converter 361” but not the specific components of the converter Dr. Friedli preferred to use rises to the level of disclosing an inoperative mode. (D.I. 584 at p. 59). I disagree. The components of a converter were commercially available (D.I. 585 at p. 59 n.73) and a POSITA would have the ability to create one. (D.I. 569 at 31). While Dr. Friedli omitted material information, he did not disclose any false information. I therefore do not find any inequitable conduct.

## H. Exceptional Case

Defendant moves for the Court to declare this case “exceptional” under 35 U.S.C. § 285 and award attorney’s fees. (D.I. 582). Defendant argues that prevailing on an inequitable conduct claim often makes a case “exceptional.” (D.I. 585 at p. 60).

### 1. Legal Standard

The award of attorney’s fees is governed by 35 U.S.C. § 285. This section provides, in its entirety, “The court in exceptional cases may award reasonable attorney fees to the prevailing party.” 35 U.S.C. § 285. The Supreme Court has defined an “exceptional” case as “simply one that stands out from others with respect to the substantive strength of a party’s litigating position

(considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated.” *Octane Fitness, LLC v. ICON Health & Fitness*, 134 S. Ct. 1749, 1756 (2014). District judges are to exercise their discretion on a case-by-case basis, considering the totality of the circumstances, when determining whether a case is “exceptional.” *Id.* The applicable burden of proof is a preponderance of the evidence. *Id.* at 1758. The Federal Circuit has held that “prevailing on a claim of inequitable conduct often makes a case ‘exceptional.’”<sup>7</sup> *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1289 (Fed. Cir. 2011).

## 2. Analysis

Defendant offers no basis for finding the case exceptional other than inequitable conduct based on the best mode violation. Because the Court found no inequitable conduct, this argument fails. Defendant has not identified, nor does the Court find, any other reason that this case “stands out from others,” and therefore denies the motion. *See Octane Fitness*, 134 S. Ct. at 1756.

## CONCLUSION

For the reasons set forth above, Inventio’s motion for JMOL is granted with respect to inventorship. The remainder of the motion is denied. The Court grants ThyssenKrupp’s motion for a declaratory judgment of non-infringement as to the ’861 patent, and denies the rest of ThyssenKrupp’s motions. An appropriate order will be entered.

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<sup>7</sup> The Court notes that this holding was made under the Federal Circuit’s old standard for “exceptional” cases, which required that the district court find either independently sanctionable litigation misconduct or that the litigation was both “brought in subjective bad faith” and was “objectively baseless.” *See Brooks Furniture Mfg., Inc. v. Dutailier Int’l, Inc.*, 393 F.3d 1378, 1381 (Fed. Cir. 2005). Since the Supreme Court’s standard is a more flexible one, however, this does not change the fact that inequitable conduct could make a case “exceptional.”